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METHOD AND SYSTEM FOR MANAGING

MONEY OF A CUSTOMER

BACKGROUND OF THE INVENTION

The present invention relates to system and a method for money settlement work in a financial institution, and more particularly, to method and

5    system for distributing money of a customer deposited into one financial institution to a plurality of financial institutions and depositing it into them.

An enterprise and an individual open their accounts in a financial institution as a customer

10   thereof, to transact business of paying or receiving deposit money, etc. "Pay-off" refers to a system by which, if a financial institution has crashed, it secures only to pay a certain amount of a total sum of deposited money amounts for each customer. The

15   customer is not secured in payment of his/her deposited money in excess of the certain amount (as of April 2002 in Japan, a checkable deposit is secured in payment in full but the other fixed-period deposits are secured in payment of only up to 10 million yen of an original

20   principal and its interest). An amount of money in excess or that certain amount is paid according to a situation of remaining finances of the crashed financial institution, thus destroying a conventional concept that deposits are secured. To cope with this

"pay-off" system, the enterprise and the individual can distribute their money over a plurality of financial institutions and deposit it therein safely. To deposit a large amount of money safely, however, a customer

5 needs to transact business with many financial institutions individually, which is a heavy burden on him/her. To solve this problem, some financial institutions have started a service to accept, at a counter in one of them, a request for depositing money

10 in a plurality of other financial institutions, in which case the customer need not actually come up to the plurality of financial institutions.

EP-A-1081628 (corresponding to JP-A-11-259588) discloses a method for linking money of a

15 customer with accounts of a plurality of financial institutions by using an information system, in which method a customer account is determined to which the money is to be transferred based on an interest rate etc. of the financial institutions.

20 JP-A-2002-157631 discloses an approach for opening a virtual account which is subject to a request for a transaction and dedicated to the transaction and at least one deposit account 20 which is subject to an actual transaction and also correlating the virtual

25 account and the at least one deposit account with each other so that, upon reception of a transaction request for the virtual account, the transaction request for the virtual account may be transferred into a

transaction request for the at least one deposit
account thus correlated.

JP-A-2001-243400 discloses an approach for
storing account information of a related account linked
5   with a plurality of user accounts, to use the related
account as an account contracted for a transaction,
thus transmitting money information from the related
account to one of the plurality of user accounts.

JP-A-09-326002 discloses a method for
10  establishing a virtual bank in a network as against a
real bank for paying a price of a purchased commodity,
which virtual bank has a virtual account of a utilizer
and a virtual account of each of sales outlets, so that
when the utilizer has purchased a commodity, the
15  virtual bank transfers money between the virtual bank
of the utilizer and the virtual bank of the sales
outlet and also gives a real bank an instruction for
automatic transfer for payment of a price, based on
which instruction the real bank settles the price.

20       Conventionally, even when depositing money
from a counter of one financial institution into
another financial institution, it means only that the
former financial institution performs counter work for
the latter financial institution, so that a customer
25  has had to instruct pay-in to each of the financial
institutions individually.  Further, even when managing
a plurality of accounts of a customer by using an
information system, it does not aim at protection of

money from "pay-off", so that the money cannot securely
be protected if it takes long time to follow a payment
procedure at a relevant financial institution or the
financial institution may crash halfway the procedure.

5   SUMMARY OF THE INVENTION

It is an object of the present invention to
provide a method and a system for suppressing a risk of
a customer suffering damages due to crashing of a
financial institution.

10      By the present invention, money paid in by a
customer is distributed over to a plurality of
financial institutions so that an outstanding amount in
each of the financial institutions may not exceed a
predetermined amount.

15      Specifically, when money is paid in by a
customer, an outstanding amount in a real account of
the customer in each of the financial institutions is
identified, to calculate a shortage of the outstanding
amount with respect to a preset amount (for example, a
20  deposited amount to be protected at the time of
crashing of the financial institutions or a
distribution money amount limit preset for each of the
financial institutions). Whether the money amount paid
in by the customer exceeds the shortage is decided and,
25  if such is not the case, the paid-in money amount is
determined to be a money amount to be paid into the
real account, to perform pay-in processing. If the

paid-in money amount exceeds the shortage, the shortage
is determined to be a money amount to be paid in, to
then repeat the same operations on real accounts other
than that real account determined to receive that money
5   amount so that a pay-in money amount may be determined
for those real accounts other than that real account,
thus performing the pay-in processing.

Further, a virtual account may be opened in
each of financial institutions for each of customers
10  and linked with a real account in each of the financial
institutions so that, when money is paid by any one of
the customers into the virtual account, a money amount
to be paid into each real account of the customer can
be determined, to transfer money from the virtual
15  account to the real account.

Further, a common account may be opened in a
financial institution so that money, if paid into a
virtual account by a customer, can be once transferred
into the common account to then determine a money
20  amount to be paid into each of real accounts possessed
by the customer and transfer the money from the common
account to the real accounts.

Here, a real account refers to an account in
the name of a customer for the purpose of retaining
25  his/her money.  A virtual account refers to an account
in the name of a customer for the purpose of retaining
his/her money temporarily.  Therefore, an outstanding
amount is zero ordinarily; however, if a customer

requests pay-in or pay-out of money, the outstanding
amount becomes a pay-in or pay-out money amount.  A
common account refers to an account having no name of a
customer or in the name of a financial institution for

5   the purpose of retaining money of the customer
temporarily.  The common account is capable of
retaining money of customers.

By the present invention, a possibility can
be reduced that an outstanding amount of a customer in

10   each of financial institutions exceeds a preset amount,
thereby suppressing a risk that he/she may lose his/her
money in excess of a predetermined amount if any one of
the financial institutions crashes.

Further, by the present invention, money of a

15   customer is not concentrated to a particular financial
institution, so that a risk can be suppressed that
he/she may lose a large amount of his/her money if the
particular financial institution crashes.  That is, if
a particular financial institution crashes, a customer,

20   who possesses money also in other financial
institutions, is less likely to lose all of the money.
This is effective also in a case where money of a
customer is not protected at all when a financial
institution has crashed.

25   Other objects, features and advantages of the
invention will become apparent from the following
description of the embodiments of the invention taken
in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an overall illustration for showing the present invention;

FIG. 2 shows a customer information table managed by money management system by referencing a customer information DB;

FIG. 3 shows a flowchart of paying money into an account according to the present invention;

FIG. 4 shows a flowchart of collecting money from accounts according to the present invention;

FIG. 5 shows a method for selecting an account in order to reduce cost due to inter-financial institution settlement; and

FIG. 6 shows a method for outputting particulars of a transaction performed by a customer.


DETAILED DESCRIPTION OF THE EMBODIMENTS

Embodiments of the present invention provide a method for realizing a service that is provided to each of customers by a plurality of financial institutions. FIG. 1 shows a configuration illustration of an overall system related to the present invention. The embodiment of the present invention uses such a configuration that a money management system 110, a central institution system 120, a financial institution A system 130, a financial institution B system 141, and a financial institution C

system 142 are connected mutually by a network system

150. In this configuration, the money management

system 110 is provided to manage transfer of money of a

customer. The money management system 110 may be

5    installed either independently or in any one of the

financial institutions. The money management system

110 mutually connects a processing device 111, an

input/output device 112, a communication device 113, a

storage device 114, and customer information DB115

10   through an internal communication path 117, being

constituted of, for example, a main frame, a

workstation, or a personal computer. The processing

device 111 is, for example, a processor for executing a

program stored in the storage device 114 in order to

15   control operations of the money management system 110.

The input/output device 112 is provided for operations

by an operator, being constituted of, for example, a

keyboard and a display. The communication device 113

is provided for the money management system 110 to

20   communicate with an external system, being constituted

of, for example, an LAN adaptor or a MODEM. The

storage device 114 is constituted of, for example, a

memory or a hard disk, storing a program required for

the processing device to operate or data required for

25   the program to execute processing. The customer

information DB115 is a DB (database) provided to manage

information of customers, details of which are

described later. The internal communication path 117

is provided to mutually connect the functional devices, being constituted of a bus, for example. Hereinafter, it is supposed that, in operation of the money management system 110, the program stored in the
5 storage device 114 is executed by the processing device 111.

The central institution system 120 is installed in a financial institution, to hold central institution account information 121. In the present
10 embodiment, although the central institution system 120 may be installed in an ordinary financial institution, preferably it is installed in such a financial institution as to have a low risk of crashing as compared to other financial institutions (for example,
15 Bank of Japan or shinkin central bank in the shinkin bank business circle) and to be especially safe. The central institution account information 121, typically referred to as an accounting-based system, is a system for managing accounts in a financial institution. In
20 the present embodiment of the present invention, a common account for all of customers participating in the present service is opened in the central institution account information 121. The common account is provided to temporarily retain money
25 deposited from all of customers participating in the present service and need not necessarily be in the name of each participant customer in order to be easily managed. The common account is not put in the name of

the individuals but shared by all of the participant

customers, so that shares of the individual customers

in the common account are managed by the money

management system 110 in the customer information DB115

5   (details of which are described later).

The financial institution A system 130 is

installed in an ordinary financial institution (which

is supposed to be financial institution A).  The

financial institution A system 130 mutually connects

10  the processing device 111, the input/output device 112,

the communication device 113, and the storage device

114 through the internal communication path 117 as in

the case of the financial institution system 110, as

well as account information 131 and an external

15  terminal 132.  Similar to the central institution

account information 121, financial institution account

information 131 is an accounting-based system of a

financial institution, for managing an outstanding

amount of a deposit in each account.  The external

20  terminal 132 is a terminal or an ATM installed at a

business office or an office center of a financial

institution, a terminal (PC etc.) of a customer

connected via the Internet to the financial

institution, or a terminal (dedicated terminal, PC,

25  stationary type telephone, portable telephone, etc.) of

a customer connected via any other public circuit to

the financial institution, constituting a device for

receiving a request for pay-in or pay-out of money from

a customer at a financial institution, registering
customer information, permitting the customer to pay in
his/her own money or pay it out, or displaying
particulars of a transaction performed by the customer.

5          The financial institution B system 141 and
the financial institution C system 142 each have a
configuration similar to that of the financial
institution A system 130.  In the present embodiment,
many financial institutions present are represented by
10   the financial institutions A, B, and C, while systems
installed in these financial institutions are
represented by the financial institution A system 130,
the financial institution B system 141, and the
financial institution C system 142.  Further, although
15   each customer of one person (or one corporation)
directly makes a transaction with different financial
institutions according to whether they are a single or
more than one, the following will make description
assuming that the customer mainly transacts business
20   with the financial institution A.  Hereinafter,
operations of the financial institution A system 130,
the financial institution B system 141, and the
financial institution C system 142 are supposed to be
processed by the processing device 111 when it executes
25   a program recorded in the storage device 114.  The
network 150 is a communication path for connecting a
variety of systems, coming in a network or the Internet
for mutually connecting financial institutions.

The following will describe a configuration
of the customer information DB115 with reference to
FIG. 2. The customer information DB115 manages a
customer information table 200 shown in FIG. 2 for each

5  customer. The customer information DB115 holds the
customer information table 200 for every customer. For
each customer, the customer information table 200 holds
a customer number 201, a name 202, nominal person
information 203, a common account share 204, a

10  financial institution number 205, a branch number 206,
an account number 207, a pay-in/pay-out permission/non-
permission 208, a money amount limit 209, and a
priority level 210. Of these, the customer number 201
is used to identify a customer uniquely. The name 202

15  refers to a customer's name or a business name etc.
The nominal person information 203 refers to reading of
a name, a customer's birth date, an address, a
representative's name, a birth date of the
representative, etc. in the case of a corporation, and

20  information (for example, a number for identifying an
identification paper (driver's license, passport,
insurance certificate, etc.) or image data of the
identification paper picked up with a scanner) used by
a financial institution in identification at the time

25  of conclusion of a contract of deposit etc. for account
opening etc. These information pieces are used by a
financial institution not only to manage customers but
also to confirm a nominal person or an identity of a

person who was actually in charge of deposit

contraction etc., in order to prevent money laundering

etc.  The common account share 204 is an amount within

the customer's rights of money retained in a common

5  account managed by the central institution account

information 121.  The financial institution number 205,

the branch number 206, the account number 207, the

money amount limit 209, and the priority level 210 are

information pieces held for each financial institution

10  in which money of a customer having the customer number

201 is retained and can be held more than one in one

customer information table 200.  The financial

institution number 205 is data that specifies which

financial institution is represented by information

15  from the branch number 206 to the priority level 210.

The branch number 206 and the account number 207 are

data pieces that respectively specify a branch and an

account, which branch has accounts, of financial

institutions identified by the financial institution

20  number 205, and are set only when the account is

already opened.

The pay-in/pay-out permission/non-permission

208 specifies whether the financial management system

110 is permitted to pay in money to the account and pay

25  out money from it, giving "permission" when it is

permitted and "non-permission" when it is not

permitted.

The money amount limit 209 gives a maximum

amount of money that can be distributed to a financial institution specified by the financial institution number 205 when the money management system 110 distributes money. The priority level 210 gives a

5   priority level according to which a financial institution specified by the financial institution number 205 of all financial institutions is selected as a distribution destination when the money management system 110 distributes money, which priority level is

10  supposed to be higher as it has a smaller numeral.

A customer makes a request for the present service from the financial institution A with which he/she transacts business mainly. A request is made at a counter of a financial institution; for example, when

15  a request is sent to the financial institution A system 130, it receives a name, another name (KANA characters), a birth date, an address, a name and a birth date of a representative etc., nominal person's information, a financial institution number of a

20  distribution-destination financial institution, a financial institution number, a branch number, and an account number of an account, if it is opened already, pay-in/pay-out permission/non-permission, and a money amount limit and a priority level for each financial

25  institution of a relevant customer from the input/output device 112 and transmits it as request information to the money management system 110 from the communication device 113. In this case, the customer

specifies a financial institution number, a branch
number, an account number, a money amount limit, a
financial institution number, and a priority level as
indispensable information for each of two financial
5    institutions or more and transmits them only to
specified financial institutions.  The money management
system 110, when having received the request
information from the financial institution A system
130, newly creates the customer information table 200
10   and records the received information.

The following will describe a mechanism for
pay-in and money distribution by use of a virtual
account, with reference to FIG. 3.  FIG. 3 shows a
processing flow 310 of the central institution system
15   120, a processing flow 320 of the money management
system 110, a processing flow 330 of the financial
institution A system 130, and a processing flow 340 of
the financial institution B system 141.  The following
will describe a flow from a moment when money is paid
20   into the financial institution A to a moment when the
money is distributed to a financial institution (the
financial institution B in this case) other than the
financial institution A.  This description holds true
also with a case where money is paid into any other
25   than the financial institution A, a later-described
case where any other than the financial institution B
is determined by the money management system 110 to be
a distribution destination, or a case where money is to

be distributed to a plurality of financial institutions.

The present processing starts when the financial institution A system 130 has received information of pay-in to an account (step 331). The account pay-in information includes information of pay-in from the external terminal 132 of the financial institution A and information of pay-in to a customer's account from any other financial institution transmitted via the network 150, being comprised of a financial institution number of the financial institution A, an account number, and a money amount. When having received pay-in information, the financial institution A system 130 decides whether a pay-in account is a virtual account based on the pay-in information and, if such is the case, obtains the customer number 201 (step 332). This decision is made in accordance with a customers' list held by the financial institution A in the storage device 114. The customers' list is a table for recording correspondence, with the customer number 201, of such customer accounts (virtual accounts) that have subscribed to a service of the present invention of the accounts of the financial institution itself. This customers' list is created by inputting information (account number and customer number 201) from the input/output device 112 when a customer has subscribed to the service. If the customers' list has an account

number specified by the pay-in information, the financial institution A system 130 decides that a relevant account is a virtual one for distribution of paid-in money and performs subsequent processing. If

5 the customers' list does not have such an account number, it decides that the account is an ordinary one and suspends processing of the processing flow 330, to perform ordinary pay-in processing.

Next, the financial institution A system 130

10 uses the financial institution account information 131, to confirm an outstanding amount of an account (virtual account) specified by the pay-in information (step 333). If a sum of the outstanding amount and a money amount specified by the pay-in information is equal to

15 or less than a certain amount, the financial institution a system 130 suspends the processing to perform ordinary pay-in processing. The certain amount refers to, for example, an amount of deposited money protected even if a relevant financial institution has

20 crashed and is set beforehand in the storage device 114 by the input/output device 112 in the financial institution A system 130. If a sum of the outstanding amount and a money amount specified by pay-in information is larger than the certain amount, on the

25 other hand, financial institution A system 130 transmits the pay-in information (financial institution number, account number, and money amount) and the customer number 201 to the money management system 110

via the network 150 (step 334).  In this case, the
financial institution A system 130 may transmit the
pay-in information and the customer 201 to the money
management system 110 irrespective of the outstanding
amount.  This means that no money is retained in the
virtual account.

The money management system 110 receives the
pay-in information and the customer number 201 (step
321).  Hereinafter, the money management system 110 is
supposed to perform processing of money on a customer
identified by the customer number 201 posted and
utilize information of the customer information table
200 identified by the customer number 201.

The money management system 110 notifies the
central institution system 120 of pay-in from the
financial institution A into a common account and
updates the common account share 204 (step 322).  This
notification contains a financial institution number of
the financial institution A and a money amount.
Updating of the common account share 204 means to add a
received money amount to the common account share 204
of a customer information table 200 identified by the
customer number 201.  When information is recorded into
the common account share 204, a customer identified by
the customer number 201 has rights of a money amount of
the common account share 204 of money in the common
account.  Further, inter-financial institution
settlement from the financial institution A to the

central financial institution is performed.

The central institution system 120, when having received notification of pay-in to the common account, transfers money of a specified money amount to
5 the common account from a financial institution account identified by the financial institution number in an account that the central institution has (step 311). In this case, inter-financial institution money settlement may be performed by the financial
10 institution A system 130 also at step 334. With this, the money paid in by the customer is paid into the common account and, also, a share of the customer is recorded in the common account share 204, thereby completing transfer of the money to the common account.

15 Next, the money management system 110 confirms an outstanding amount of an account to which the customer's money is to be distributed (step 323). Specifically, the outstanding amount of the account is confirmed by asking one or a plurality of financial
20 institutions about whose financial institution number 205, branch number 206, and account number 207 are registered in a customer information table 200 identified by the received customer number 201. An outstanding amount is confirmed when the money
25 management system 110 transmits the branch number 206 and the account number 207 via the network 150 to a financial institution identified by the financial institution number 205 and, then, the financial

institution B system 141 of the transmission-
destination financial institution (for example,
financial institution B) confirms an outstanding amount
of an account based on the financial institution

5    account information 131 and posts it to the money
management system 110 (step 341).

Next, the money management system 110
determines distribution destinations of the money (step
324).  The distribution destinations are determined by

10   picking up such financial institutions as to be
specified as "permitted" by the pay-in/pay-out
permission/non-permission 208 in a descending order of
the priority level 210(ascending order of a numeral).
First, the money management system 110 stores in the

15   storage device 114 a distribution outstanding amount in
a condition where a money amount specified by the pay-
in information is set as an initial value.  This
process is repeated until there is no more distribution
outstanding amount.

20        The money management system 110 checks up to
a certain amount of shortage in an outstanding money
amount in the financial institution or a shortage up to
the money amount limit 209 in an outstanding amount in
a financial institution to which the money amount limit

25   209 is set.  Specifically, in a case where a financial
institution currently checked by the priority level 210
and identified by the financial institution number 205
is already checked for its outstanding amount at step

323 but yet to have a money amount limit 209 set to it, the system 110 stores in the storage device 114 as a shortage a value obtained by subtracting the outstanding amount from the certain amount. Further,

5  in a case where a financial institution is already checked for its outstanding amount and has a money amount limit 209 registered to it, it stores in the storage device 114 a value obtained by subtracting the money amount limit from the certain amount as a

10  shortage. In the other cases, it stores in the storage device 114 a value obtained by subtracting the money amount limit 209 from the certain amount as a shortage. If a shortage of the certain amount or a shortage of the money amount limit 209 exceeds 0, the money is to

15  be distributed to the financial institution and its money amount is to be distributed to the financial institution (i.e., financial institution identified by the financial institution number 205). Further, if a shortage of the certain amount or a shortage of the

20  money amount limit 209 is not less than a current distribution outstanding amount, the distribution outstanding amount is set as a distribution amount, thereby completing determination of the distribution amount.

25       If determination of a distribution amount is yet to be completed, the priority level 210 checks a next financial institution in a condition where a value obtained by subtracting from the certain amount a

distribution amount calculated from the distribution outstanding amount is set as a new distribution amount.

This process is repeated until there is no more distribution outstanding amount or potential distribution-destination financial institutions (financial institutions which has its financial institution number 205 to priority level 210 registered in the customer information table 200) are all checked. A money amount at a moment when there is no more distribution outstanding amount is determined to be distributed to each of the financial institutions and an outstanding amount of the distribution money amount is added to any distribution destination when the potential distribution-destination financial institutions are all checked. In this case, a post-pay-in outstanding amount exceeds the certain amount. The money management system 110 may distribute an entire amount of outstanding amounts of money amounts to be distributed into one account (for example, an account of a financial institution having a low possibility of crashing) or evenly distribute into the accounts an amount obtained by dividing the outstanding amount of the distribution money amount by the number of accounts of the customer.

Although in the above a pay-in money amount to be determined has been compared to an outstanding amount of each account, the outstanding amount may be that of each financial institution. That is, if a

customer has a plurality of accounts in one financial institution (that is, information of the same financial institution number 205 is present as many as two or more in the customer information table 200 of a

5  customer), a total sum of outstanding amounts of the plurality of accounts may be used as the outstanding amount.  It is thus possible to avoid an outstanding amount of deposited money from exceeding a certain amount even if customer's money is distributed over a

10  plurality of accounts.

Further, although in the above the priority level 210 has been used to check financial institutions in a sequential order, this order need not strictly be determined for each of customers.  For example, the

15  same order may be followed for all of the customers (however, preferably such financial institutions as to have an account already opened in them are given a higher priority level so as to decrease the number of times of opening a new account described later).  If,

20  in this case, a distribution-destination financial institution (for example, financial institution B) has no customer's account opened in it, that is, if a branch number 206 or an account number 207 corresponding to the relevant financial institution

25  number 205 in the customer information table 200 is not registered, account opening processing is performed to open an account of the customer in the financial institution B.  Although the following will describe a

case of opening an account in the financial institution
B, any financial institution other than the financial
institution B or a plurality of financial institutions
may be subject to account opening.  Further, if there
5   is no need to open an account, the process goes to step
327.

In the account opening processing, first the
money management system 110 transmits as an account
opening instruction a name 202 and nominal person
10  information 203 in the customer information table 200
to the financial institution B system 141 (step 325).
When having received the account opening instruction
(step 342), the financial institution B system 141
displays information contained in the opening
15  instruction on the external terminal 132 installed in a
business office, etc.  A person in charge in the
financial institution B watches the displayed
information to open an account of a customer.  Next,
the external terminal 132 of the financial institution
20  B system receives an incoming account opening result
comprised of a branch number and an account number
(step 343) and transmits it to the money management
system 110 (step 344).  When having received the
account opening result, the money management system 110
25  records the received information in the branch number
206 and the account number 207.

The money management system 110 instructs to
distribute money in accordance with determined

distribution destinations and distribution amounts (step 327). This distribution instruction is executed by transmitting a distributed-money pay-in notification comprised of the account number 207 and the money

5 amount to the financial institution B system of a distribution-destination financial institution (which is supposed to be, for example, financial institution B). When having received the distributed-money pay-in notification, the financial institution B system 141

10 performs pay-in processing by adding a money amount specified by the financial institution account information 131 to an outstanding amount of an account specified by it (step 345).

The money management system 110 notifies the

15 central financial institution system 120 of pay-in from a common account to each of the distribution-destination financial institutions and updates the common account share 204, to perform inter-financial institution settlement (step 328). This notification

20 contains a financial institution number and a money amount for each of the distribution-destination financial institutions. Here, updating of the common account share 204 means subtraction of a total sum of the money amounts distributed to a common account share

25 204 in the customer information table 200 identified by the customer number 201. Inter-financial institution settlement means settlement from a financial institution having the common account to a

distribution-destination financial institution.
Although in the present inter-financial institution
settlement an instruction has been given by the money
management system 110, it may be executed when the
central institution system 120 updates the common
account.

Next, the money management system 110
transmits a pay-in history as a processing result to
the financial institution A system 130 and stores it in
its own storage device 114 (step 329). The financial
institution A system 130 stores the pay-in history in
the storage device 114 (step 335). The pay-in history
comprises a financial institution subject to first pay-
in and a paid-in amount for each customer,
distribution-destination financial institution and a
distributed money amount, a distribution date, and a
customer's post-pay-in outstanding money amount (value
obtained by adding a paid in money amount to a total
sum of outstanding amounts confirmed at step 323). The
pay-in history is utilized at the time of inquiry by
the customer (details of which are omitted). Now,
money paid into the financial institution A has been
distributed to the financial institutions registered in
the customer information table 200, without exceeding a
certain amount or a money amount limit.

Further, in the above flow the paid-in money
has been retained in the common account temporarily, to
deposit the money in a financial institution having a

high reliability during processing taking long time
such as account opening, thereby suppressing a risk of
losing the money owing to crashing of the financial
institution.  Therefore, if it is unnecessary to open
5  an account or if the processing can be finished in
short time, it may be possible not to use the common
account.  Specifically, two processing items are
eliminated; one processing item of steps 322 and 311 of
FIG. 3, for inter-financial institution settlement and
10  pay-in to the common account and the other processing
item of steps 328 and 312 for inter-financial
institution settlement and pay-out from the common
account.  Further, at step 327 for money distribution
instruction, not only pay-in to a customer's account at
15  a distribution-destination financial institution but
also inter-financial institution money settlement from
a financial institution to which first pay-in has been
made (financial institution A in the present
embodiment) to a distribution-destination financial
20  institution (financial institution B in the present
embodiment) are performed.  In this case, processing
after first pay-in to the financial institution A to
ending of money distribution can be performed in short
time to avoid crashing of the financial institution
25  during the processing or one series of processing items
can be performed inseparably to eliminate a risk of
losing the money if the financial institution has
crashed during distribution.  Further, if there is such

an account, in the financial institution A to which first pay-in has been made, that its money is protected even upon crashing, the financial institution A system 330 may pay in money to that account in place of the

5      common account.

Another method may be employed for distributing money amount paid in from a customer, by which the pay-in money amount is divided by the number of real accounts of the customer so that each pay-in

10     money amount obtained by the division may be transferred to each of the real accounts of the customer. That is, the money management system 110 calculates the number of real accounts of a customer based on the customer number 201 as referencing the

15     customer information table 200. Then, the money management system 110 divides the pay-in money amount by the number of the real accounts that the customer has. Further, the money management system 110 identifies each real account of the customer based on

20     the customer number 201 as referencing the customer information table 200, to acquire an outstanding amount of each real account of the customer and a certain amount and/or money amount limit. Then, the money management system 110 subtracts the outstanding amount

25     from the certain amount and/or money amount limit for each real account, to calculate a shortage in balance between each pay-in money amount obtained after the division and each real account, thereby deciding

whether each pay-in money amount obtained after the

division exceeds the shortage in each real account.  If

it decides that each pay-in money amount does not

exceed the shortage, the money management system 110

5    determines each pay-in money amount obtained after the

division to be a money amount to be paid into the real

account.  If it has decided that each pay-in money

amount obtained after the division exceeds the

shortage, on the other hand, the money management

10   system 110 calculates a surplus amount and also

determines to be a shortage a money amount to be paid

into such a real account that each pay-in money amount

after the division has exceeded the shortage.  Further,

the money management system 110 divides the surplus by

15   a numeral obtained by subtracting one from the number

of the real accounts of the customer.  One is

subtracted from that number in order to exclude from

the subsequent arithmetic operations such a real

account that each pay-in money amount after the

20   division has exceeded the shortage and also that a

money amount to be paid into it is already determined.

The money management system 110 determines, in much the

same as described above, an amount obtained by adding a

surplus after the division to each pay-in money amount

25   after the division as each money amount after the

division to be paid into a real account other than that

for which a pay-in money amount is already determined.

This distribution method does not always require a

priority level. If a priority level is set, the money management system 110 determines a pay-in money amount starting from the real accounts with higher priority levels and, otherwise, determines a pay-in money amount

5 starting from the real accounts arranged in the customer information table 200. The money management system 110 may alter the priority level dynamically. For example, the money management system 110, when having acquired an outstanding amount, may sort real

10 accounts based on the outstanding amount, to determine priority levels in an ascending or descending order of the outstanding amount. That is, the money management system 110 may determine the priority levels in an ascending or descending order of the shortage.

15 The following will describe a mechanism for pay-out and money concentration by use of a virtual account, with reference to FIG. 4. FIG. 4 shows a processing flow 420 of the money management system 110, a processing flow 430 of the financial institution A

20 system 130, a processing flow 440 of the financial institution B system 141, and a processing flow 450 of the financial institution C system 142. The following will describe a flow in a case where an instruction is issued for pay-out (transmission or transfer) from the

25 financial institution A to the financial institution C. The flow holds true also with the case of pay-in/pay-out for any other financial institutions and a case where the money management system 110 has determined a

plurality of financial institutions as a pay-out source
as described later.  Further, if the financial
institutions A and C are the same as each other, the
flow refers to that for in-house transfer.

5          The present processing starts when the
financial institution A system 130 has received
information of pay-out from an account (step 431).  The
account pay-out information refers to information of
pay-out from the external terminal 132 of the financial
10    institution A or pay-out information transmitted over
the network 150, containing a financial institution
number and an account number of the financial
institution A and a financial institution number and an
account number of a pay-out destination financial
15    institution (financial institution C in this case).
When having received the pay-out information, the
financial institution A system 130 decides whether an
account of a pay-out source indicated by the pay-out
information has subscribed to a service of the present
20    invention and, if such is the case, acquires a customer
number 201 as in the case of step 332 (step 432).  Only
when an account number specified by the pay-out
information is present in a customers' list, the
financial institution A system 130 proceeds with the
25    subsequent processing and, otherwise, suspends the
processing flow 430, to perform ordinary pay-out
processing.

          Next, the financial institution A system 130

confirms an outstanding amount of an account specified
by the pay-out information as referencing the financial
institution account information 131 (step 433). If the
outstanding amount is not less than a money amount
5   specified by the pay-out information, the financial
institution A system 130 suspends the processing, to
perform almost ordinary pay-out processing. If it is
less than the money amount specified by the pay-out
information, the financial institution A system 130
10  transmits over the network 150 to the money management
system 110 the pay-out information (a financial
institution number and an account number of a financial
institution having received the pay-out information, a
money amount, and a financial institution number and an
15  account number of a pay-out destination) and the
customer number 201 (step 434). In this case, the pay-
out information and the customer number 201 may be
transmitted to the money management system 110 also
when the outstanding amount is not less than the money
20  amount specified by the pay-out information.

The money management system 110 receives the
pay-out information and the customer number 201 from
the financial institution A (step 421). Thereafter,
the money management system 110 is supposed to perform
25  money processing on a customer identified by the posted
customer number 201 and also utilize information of a
customer information table 200 identified by the posted
customer number 201.

The money management system 110 confirms an outstanding amount of an account supposed to be a pay-out source of customer's money (step 422). The financial institution B system 141 of a pay-out source

5  financial institution (financial institution B in this example) transmits an outstanding amount to the money management system 110 (step 441). Steps 422 and 441 are the same as steps 323 and 341 respectively, processing of which steps are performed on all

10  financial institutions whose financial institution number 205, branch number 206, and account number 207 are registered.

Next, the money management system 110 determines a money pay-out source and a pay-out money

15  amount (step 423). The pay-out source is determined in the same way as a distribution destination is determined at step 324. However, although financial institutions have been retrieved in a descending order of priority levels until a total sum of margins to a

20  certain amount or a money amount limit reaches a pay-in money amount at step 324, in this example, financial institutions for which the pay-in/pay-out permission/non-permission 208 has come up with "permission" are retrieved in an ascending order of the

25  priority level 210 until a total sum of outstanding amounts reaches a pay-out money amount, thereby determining a pay-out money amount for each account. If even a total sum of all the confirmed outstanding

amounts does not reach a money amount specified by the pay-out information, the processing is ended because of insufficiency in outstanding amount.

The money management system 110 instructs money transfer in accordance with the determined pay-out source and a relevant pay-out money amount (step 424). This transfer instruction demands withdrawing of a pay-out money amount from a customer's account to each of financial institutions determined to be the pay-out source at step 423 and pay-in of money to a pay-out destination in accordance with the pay-out information received at step 421. This instruction may be transmitted by the money management system 110 to both of the pay-out source and the pay-out destination or transmitted to the pay-out source together with information of the pay-out destination, asking for transmission of money.

If, in this case, the pay-out source is determined more than one at step 423, money is transmitted to the pay-out destination on more than one occasion. A customer subject to pay-in, who must receive pay-in on one occasion normally, receives pay-in of segmented money amounts on a plurality of occasions, thereby making it difficult to perform correlation (negation) with a request on a sales source (customer of the financial institution A in charge of pay-out in this case). Therefore, the money management system 110 appends identification data (a numeral to

enable combining a plurality of transfer operations or
information of pay-out from the pay-out source (name
203 of the pay-out source, etc.)) to an instruction to
be transmitted to the pay-out source or destination.

5   If the identification data is appended, the pay-out
destination financial institution C system 142 performs
pay-in only on one occasion by handling as one pay-in
data item a notification of a plurality of pay-in
occasions transmitted from the money management system

10  110 or the plurality of pay-out source financial
institutions or, even if performing individual pay-in
operations, describes the identification data in pay-in
particulars (containing description into passbook,
display on a screen in a firm banking system) to be

15  presented to the customer.

Next, the money management system 110
transmits a pay-out history as a processing result to
the financial institution A system 130 and also stores
it in the storage device 114 of the money management

20  system 110 (step 425).   The financial institution A
system 130 stores the pay-out history in the storage
device 114 (step 436).   The pay-out history comprises a
financial institution having received the pay-out
information first for each customer, pay-out source

25  financial institutions and their respective pay-out
money amounts, dates, and a customer's post-pay-out
outstanding money amount (value obtained by subtracting
a paid-out money amount from a total sum of outstanding

amounts confirmed at step 433). The pay-out history is utilized at the time of inquiry by the customer (details of which are described later).

By the above processing, when an instruction
5 is issued by a customer to transfer (transmit) money from a certain account (account in the financial institution A in this example) to another account (financial institution C in this example) and even if the account in the financial institution A is
10 insufficient in outstanding amount, this transfer can be performed by collecting money from an account (account in the financial institution B in this example) in at least one of other financial institutions.

15 Further, although in the above example the money management system 110 has issued an instruction for pay-out and pay-in, a transfer instruction containing information of the pay-in destination and identification data may be transmitted to the pay-out
20 source, to permit a money collection source to transmit money and the identification data to the pay-in destination.

Further, although the above example has been described in a case where a customer has instructed to
25 transfer money from the financial institution A to the financial institution C, withdrawal of money in the financial institution A may not be accompanied by pay-in to the financial institution C. This holds true

with, for example, a case where a customer withdraws
money in cash.

In the above processing of pay-in sown in
FIG. 3 and pay-out shown in FIG. 4, an outstanding
5    amount of an account to which a customer directly gives
a pay-in or pay-out instruction need not be managed by
the financial institution account information 131 of
the financial institution A system 130.  That is, by
the present method, an account number is utilized only
10   as a pay-in/pay-out counter, to retain actual money in
another account.  This is realized by keeping the
outstanding amount to zero always so that the pay-
in/pay-out permission/non-permission may come up with
"non-permission".

15       The above has described processes for pay-out
from a virtual account with reference to FIG. 4 and
pay-in to it with reference to FIG. 3.  A problem of
the case of utilizing the method described is that each
time a customer pays in or pays out money, actually a
20   pay-in or pay-out operation occurs on a plurality of
occasions, to increase costs.  Inter-financial
institution settlement, in particular, requires a high-
cost commission as compared to transfer in the same
financial institution.  Therefore, an account selection
25   method is described below which decreases the number of
times of inter-financial institution settlement.
First, in determination of a pay-out source at step
423, prior to checking in an order of the priority

level 210, if an account of a pay-out destination
financial institution indicated by pay-out information
received at step 421 is present in the customer
information table 200, the accounts are checked
5   preferentially irrespective of the priority level 210,
so that any one of them that is capable of pay-out is
determined to be a pay-out source account.  In such a
manner, transfer in the same financial institution is
performed preferentially if the same financial
10  institution as that of an account supposed to be a pay-
out source has an account of a pay-out source customer.

Further, although a pay-out source and a
distribution destination may be determined in the same
way as in the cases of steps 423 and 324, respectively,
15  if a pay-out destination due to the pay-out information
received at step 421 has been registered in any
customer information table 200 of the customer
information DB115, transfer can be performed from one
virtual account to another (without using a common
20  account) by determining a pay-in destination at step
424 in the same way as in the case of step 324.  In
this case, preferably the pay-out source and the
distribution destination may be the same financial
institution as much as possible in order to suppress
25  inter-financial institution settlement.  A method of
determining the pay-out source and the distribution
destination is described below with reference to FIG.
5.  FIG. 5 shows an example of an account 510 of a

customer who wishes to pay out money and an account 520
of a customer who is to receive the money.  In FIG. 5,
the pay-out source customer has his/her accounts in
financial institutions X511, Y512, and Z513, while the

5    pay-out destination customer has his/her accounts in
financial institutions Y521, Z522, and W523.  In such a
case that the pay-out source customer and the pay-out
destination customer have a common financial
institution (financial institutions Y and Z in the

10    figure) where they have their respective accounts,
these common financial institutions are selected
preferentially.  Specifically, the money management
system 110 retrieves pay-out sources about financial
institutions common to the pay-out destination before

15    determining the pay-out source in an order of the
priority level 210 at step 423.  In determination of a
distribution destination at step 324, the money
management system 110 checks the common financial
institutions as a distribution destination

20    preferentially.  With this, it is possible to perform
transfer in the same financial institution
preferentially as in the case of transfers 531 and 532.

        The following will describe pay-in/pay-out
particulars of customer's money with respect to FIG. 6.

25    A customer needs to confirm his/her own transaction
later in some cases.  In such a case, a particulars
output system utilized by the customer (external
terminal 132, a transaction terminal (not shown)

connected to the network 150 independently of financial

institutions, etc.) receives a pay-in history or a pay-

out history of the money management system 110 or the

financial institution A system 130 (as in the case of

5    any other financial institutions) and displays or

prints pay-in/pay-out particulars 600.  In this case,

the money management system 110 or the financial

institution A system 130 responds to a request from a

transaction terminal utilized by the customer, to

10    transmit the pay-in history and the pay-out history.

Contents of the pay-in/pay-out particulars 600 are

organized from the pay-in and pay-out histories and

displayed by the money management system 110 or the

financial institution A system 130 or the external

15    terminal 132 or the transaction terminal.

The pay-in/pay-out particulars 600 comprise

the following.  A customer information portion 601

constitutes information of a customer corresponding to

the pay-in/pay-out particulars 600 and is acquired from

20    the customer information DB115 of the money management

system 110 or the financial institution account

information 131 of the financial institution A system

130.  A particulars portion 602 is created from a pay-

in history and a pay-out history stored in the storage

25    device 114 by the money management system 110 or the

financial institution A system 130, to record details

of a transaction of the customer, being comprised of a

date 603, a transaction type 604, processing details

605, a financial institution 606, a money amount 607,
and an outstanding amount 608.  The date 603 indicates
a day on which a transaction indicated by the
information was performed.  The transaction type 604

5  indicates a type of either pay-in or pay-out.  The
processing details 605 indicate how a transaction
indicated by the transaction type 604 was actually
performed, to show a type of a total sum of money
amounts paid-in to or paid-out from the financial

10  institution, pay-in (distribution) from the financial
institution to any other financial institution as
involved in pay-in to the financial institution, or
pay-out (concentration) from any other financial
institution as involved in pay-out from the financial

15  institution.  The financial institution 606 indicates
on an account of which financial institution the
processing details 605 were performed.  The money
amount 607 indicates a money amount paid in or paid out
as indicated by the processing details 605.  The

20  outstanding amount 608 indicates an outstanding amount
of money of the customer that is left after pay-in or
pay-out processing.

The outstanding amount of each financial
institution may be enquired by the money management

25  system 110 to the financial institution system each
time the customer makes an inquiry about paid-in or
paid-out money amount or an outstanding amount or,
instead of enquiring to the financial institution

system, be stored and managed by the money management
system 110. Further, a common account and a virtual
account need not be provided. That is, a virtual or
real account may be used in place of a common account
5   or a common or real account may be used in place of a
virtual account. Further, functions of the money
management system 110 may be provided to the financial
institution system.

Further, in a case where a customer has
10  requested pay-in, the pay-in operation may be performed
preferentially on a real account of a financial
institution system that received the pay-in request
within a predetermined amount. Further, in a case
where a customer has requested pay-out, the pay-out
15  operation may be performed preferentially on a real
account not of a financial institution that has
received the pay-out request. It is thus possible to
avoid money of a customer from being decreased in a
financial institution that has received a pay-in or
20  pay-out request from the customer.

By the embodiments of the present invention,
it is possible to suppress a risk of a customer losing
his/her money owing to crashing of a financial
institution. Money, if paid into one account in a
25  financial institution, can be distributed to a
plurality of other financial institutions, to minimize
a risk of losing the money if the financial institution
has crashed. It is thus possible for a customer to use

one account as a virtual account for use in pay-in and pay-out only, in order to automatically distribute his/her money to a plurality of financial institutions so that he/she can concentrate his/her money from the

5  plurality of financial institutions, thus facilitating a transaction.  Further, the present invention makes it possible for a user to easily confirm particulars of a transaction by use of a virtual account.

It should be further understood by those

10  skilled in the art that although the foregoing description has been made on embodiments of the invention, the invention is not limited thereto and various changes and modifications may be made without departing from the spirit of the invention and the

15  scope of the appended claims.